

CLAIMS

1. A refrigerator comprising:

a housing including a cooling compartment and a machine compartment;

5 a refrigeration cycle provided in the housing, the refrigeration cycle including a compressor, a condenser, a decompressor, and an evaporator, the refrigeration cycle providing a refrigerant path, the condenser accommodated in the machine compartment;

a refrigerant provided in the refrigeration cycle and flowing in the
10 refrigerant path; and

a blower for cooling the condenser,

wherein the condenser includes

a pipe formed to have a helical shape with gaps, the helical shape having an inner space, a first opening, and a second opening
15 opposite to the first opening, the inner space having a substantially cylindrical shape between the first opening and the second opening, and

a fin mounted on the pipe, and

wherein the first opening faces the blower, and a flow resistance between the second opening and the inner space is larger than a flow
20 resistance between the gaps of the helical shape and the inner space.

2. The refrigerator according to claim 1, further comprising a cover for closed at least a portion of the second opening.

25 3. The refrigerator according to claim 1, wherein the machine compartment has an inner wall located near the second opening of the condenser.

4. The refrigerator according to claim 1, wherein air flows from the gaps of the helical shape into the inner space of the condenser and is discharged from the blower.

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5. The refrigerator according to claim 1, wherein air flows from the blower into the inner space of the condenser and is discharged through the gaps to an outside of the inner space.

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6. The refrigerator according to claim 1, further comprising a flow-control guide provided around the condenser, the flow-control guide having a plurality of ventilation slots formed therein.

7. The refrigerator according to claim 6,

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wherein the machine compartment has an air inlet provided therein for introducing air into the machine compartment, and

wherein the ventilation slots of the flow-control guide include a first ventilation slot and a second ventilation slot located farther from the air inlet than the first ventilation slot, the second ventilation slot having a size larger than a size of the first ventilation slot.

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8. The refrigerator according to claim 1, wherein the machine compartment has an air inlet provided therein for introducing air into the machine compartment.

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9. The refrigerator according to claim 8, further comprising a filter provided at the housing at an upstream of air from the air inlet of the

machine compartment.

10. The refrigerator according to claim 8, wherein the air inlet is located at an upstream of air from the second opening.

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11. The refrigerator according to claim 8, wherein the air inlet is provided in a bottom of the housing.

12. The refrigerator according to claim 1, further comprising an air
10 outlet for discharging air from the machine compartment.

13. The refrigerator according to claim 12, wherein the air outlet is provided at a bottom of the housing.

15 14. The refrigerator according to claim 1, wherein sizes of the gaps of the helical shape of the condenser becomes larger as the gaps are located from the first opening to the second opening.

15. The refrigerator according to claim 1, further comprising a
20 controller operable to activate the blower while the compressor operates, wherein the compressor is located in the machine compartment.

16. The refrigerator according to claim 15, wherein the controller is operable to activate the blower during a portion of a time when the
25 compressor operates, and to stop an operation of the blower during another portion of the time.

17. The refrigerator according to claim 15, wherein the controller is operable to activate the blower while the compressor operates when an ambient temperature outside the refrigerator is not lower than a predetermined temperature.

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18. The refrigerator according to claim 15, wherein the controller is operable to stop an operation of the blower while the compressor operates when an ambient temperature outside the refrigerator is lower than a predetermined temperature.

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19. The refrigerator according to claim 1, wherein the fin has a thin ribbon shape and is formed to have a helical shape about the pipe.